

# **Understanding Internet Performance**

### Delivered vs. Experienced

Internet Service Providers (ISPs) typically have a number of different plans, each promising a different tier of speed.



But when it comes to internet speed, what you experience isn't always what the ISP is delivering.

## The Complexity of Internet Speed

From ISP to Gateway to end-user device



### Why speeds differ beyond the Gateway



#### **Age of equipment** Older equipment, particularly routers, can't handle today's advanced throughput speeds



#### **Type of equipment** Mesh systems can increase coverage but can also limit speeds by assigning only a portion of the available

bandwidth to each Wi-Fi extender



### Ethernet vs. Wi-Fi

A direct ethernet connection means better performance, but most users and devices are Wi-Fi first (and in many cases, Wi-Fi only)



### **Router location**

The distance from your router and the types of walls and other objects in the way can negatively impact performance

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**RF** interference

Devices like microwaves, baby monitors, and wireless headsets can cause interference and reduce speeds

## Speed Matters: Making the Most of Your Internet Connection

Understanding the path your internet takes — from your ISP to the gateway to your device — helps explain why experienced internet performance might not always match the speeds promised on a provider's Consumer Broadband Label.





If your Speedtest results are significantly lower than the speeds you pay for, try placing your router in a central location away from any sources of interference, while also making sure your equipment can handle your plan's speeds. For more on troubleshooting your connection, check out our guide on how to make sure you're getting the internet service you're paying for.

From measuring and monitoring network performance with **Speedtest**<sup>®</sup> to identifying problems and incidents with **Downdetector**<sup>®</sup>, our platforms empower consumers across the globe to understand and optimize their internet experience.

